Communication protocol

- 19200 bps, 8 data bits, 1 stop bit, no parity bit

Read data from Spr8 ("read 3 registers from address 0")

Request

address Spr8	Function code	Register begining address Hi	Register begining address Lo	Number of registers Hi	Number of registers Lo	CRC Lo	CRC Hi

example (hex): 61 03 00 00 00 03 0C 6B

- address of regulator is: 97 dec

Answer

address Spr8	Function code	Number of bytes	Data 1 Hi	Data 1 Lo	Data 2 Hi	Data 2 Lo	Data 3 Hi	Data 3 Lo	CRC Lo	CRC Hi

Recived data explained:

- data 1 – measured temperature * 10
- data 2 – set temperature * 10
- data 3 Hi – 0
- data 3 Lo

ErP	ErS	parametrizing	output 2	output 1	mode bit 2	mode bit 1	mode bit 0
bit 7.			bit 6.	bit 5.		bit 4.	bit 3. bit 2. bit 1. bit 0.

Mode:

- OFF 000 bin 0 dec
- HEA 001 bin 1 dec
- CoL 010 bin 2 dec
- H_C 011 bin 3 dec
- diS 100 bin 4 dec

example (hex): 61 03 06 00 D3 00 FF 00 0B 7D 52

- addressa regulator: 97 dec
- measured temperature: 21.1 ºC
- set temperature: 25.5 ºC
- mode : H_C
- output 1: ON
- output 2: OFF
- parametrizing: inactive
- Ers: no
- ErP: no

Write data Spr8 ("write 1 register to address 0")

Request

address Spr8	Function code	Register begining address Hi	Register begining address Lo	Number of registers Hi	Number of registers Lo	Number of bytes	Data 1 Hi	Data 1 Lo	CRC Lo	CRC Hi

Write SP:

- data 1 – SP * 10

example (hex): 61 10 00 00 00 01 02 00 EA 8F DD

- address: 97 dec
- set SP to 23.4 ºC

Answer

address Spr8	Function code	Register begining address Hi	Register begining address Lo	Number of registers Hi	Number of registers Lo	CRC Lo	CRC Hi

example (hex): 61 10 00 00 00 01 08 69

- address: 97 dec
- the change was made

Read parameters from Spr8 ("read 3 registers from address 3")

Request

address Spr8	Function code	Register begining address Hi	Register begining address Lo	Number of registers Hi	Number of registers Lo	CRC Lo	CRC Hi

example (hex.., address is 01): 01 03 00 03 00 03 0C 6B

Answer

address Spr8	Function code	Number of bytes	Data 1 Hi	Data 1 Lo	Data 2 Hi	Data 2 Lo	Data 3 Hi	Data 3 Lo	CRC Lo	CRC Hi

example:

- data 1 Hi – HSH (histeresys * 10)
- data 1 Lo – HSC (histeresys * 10)
- data 2 – FLt
- Data 3 Hi – dbd (dbd * 10)
- data 3 Lo

-	-	TPU bit	SAF bit 1	SAF bit 0	mode bit 2	mode bit 1	mode bit 0
bit 7.			bit 6.	bit 5.	bit 4.	bit 3.	bit 2. bit 1. bit 0.

TPU:

- CEL 0 bin 0 dec
- FAH 1 bin 1 dec

SAF:

- noA 00 bin 0 dec
- CoL 01 bin 1 dec
- HEA 10 bin 2 dec

Mode:

- OFF 000 bin 0 dec
- HEA 001 bin 1 dec
- CoL 010 bin 2 dec
- H_C 011 bin 3 dec
- diS 100 bin 4 dec

example (hex): 01 03 06 0A 0B 00 05 0C 21 xx xx

- address: 1 dec
- HSH: 1.0 º
- HSC: 1.1 º
- FLt: 5
- dBd 1,2 º
- mode: HEA
- SAF: noA
- TPA: FAH

Write parameters to Spr8 ("write 3 registers to address 1")

Request

address Spr8	Function code	Register begining address Hi	Register begining address Lo	Number of registers Hi	Number of registers Lo	Number of bytes	Data 1 Hi	Data 1 Lo	Data 2 Hi	Data 2 Lo

Data 3 Hi	Data 3 Lo	CRC Lo	CRC Hi

- data 1 Hi – HSH (HSC * 10)
- data 1 Lo – HSC (HSC * 10)
- data 2 – FLt
- data 3 Hi – dbd (dbd * 10)
- data 3 Lo

-	-	TPU bit	SAF bit 1	SAF bit 0	mode bit 2	mode bit 1	mode bit 0
bit 7.				bit 6. bit 2.	bit 5. bit 1.	bit 4. bit 0.	bit 3.

example (hex): 01 10 00 01 00 03 06 10 11 00 08 04 2B 8A CB

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address: 1 dec
HSH=1.6,
HSC=1.7,
FLt=8, dbd=0.4,
TPU=1(F),
SAF=01(CoL),
Mode=011 (H_C)

Answer

address Spr8	Function code	Register begining address Hi	Register begining address Lo	Number of registers Hi	Number of registers Lo	CRC Lo	CRC Hi

example (hex): 61 10 00 01 00 03 xx xx

- address: 01 dec
- the request was made ok